DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017795
Date Inspected: 20-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: ABF: Mr. Shang Qing Quan, Mr. Li Shi You

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Hong Liang, stencil 200113 used shielded metal arc welding procedure specification WPS-B-P-2113-FCM-1 to make OBG segment 13CE corner assembly stiffener plate welds CA3014C-040 and CA3014C-0410. This QA Inspector observed a welding current of approximately 165 amps and Mr. Hong Liang appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Dan Deyin, stencil 044795 used flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair-1 to make OBG segment 13AE weld repair B-R16005. See UT report 787-UT-16142 for additional information. This weld joins floor beam FB3110A to the bottom plate. This QA Inspector observed ABF CWI Mr. Shang Qing Quan had recorded a welding current of 315 amps and 30.5 volts. This QA Inspector observed that Mr. Dan Deyin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 used flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair-1 to make OBG segment 13AE weld repair B-WR16005. See UT report 787-UT-16142 for additional information. This weld joins floor beam FB3110A to the bottom plate. This QA Inspector observed ABF CWI Mr. Shang Qing Quan had recorded a welding current of 315 amps and 30.5 volts. This QA Inspector observed that Mr. Zhang Quin Quan appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 used flux cored welding procedure WPS-B-T-2231-B-U2-F make OBG segment 13CE weld SEG3011A-016. This QA Inspector measured a welding current of approximately 275 amps, 31.0 volts and Mr. Chen Chuanzong appeared to be certified to make this weld. This QA Inspector observed the base materials were preheated with electric heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hu Yancheng stencil 049339 used shielded metal arc procedure WPS-B-P-2214-B-U2-F to make OBG segment 13CE weld SEG3011A-015. This QA Inspector observed Mr. Hu Yancheng has a welding current of approximately 170 amps and the base materials appeared to have been preheated with electric heaters prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container that was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 054013 used shielded metal arc procedure WPS-B-P-2214-B-U2-F to make OBG segment 13CE weld SEG3011A-015. This QA Inspector observed a welding current of approximately 160 amps and the base materials appeared to have been preheated with electric heaters prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container that was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 201087 used shielded metal arc procedure WPS-B-P-2312-TC-P4 to tack weld SEG3019AP-001. This weld joins OBG anchor plate AP3001 to AP3002. This QA Inspector observed a welding current of approximately 190 amps and the base materials were preheated with a torch prior to commencement of welding. This QA Inspector observed the shielded metal arc welding electrodes were stored in an electrically heated electrode storage container and it was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 used submerged arc welding procedure WPS-B-T-2221-B-L2C-S-2 to make OBG segment 14W weld SEG3020AP-001. This weld joins anchor plate AP3018 to AP3019. This QA Inspector observed a welding current of approximately 700 amps and 28.0 volts. Ms. Wang Lanying appeared to be certified to make this weld, and electrical heaters had been used to preheat the base material. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 used flux cored welding procedure WPS-B-T-2232-U4b-F to make OBG welds between OBG segment 13CW corner assembly deck plate DP3142A

and edge plate DP3032A near panel point PP124. ABF CWI Mr. Li Shi You informed this QA Inspector that he does not have a weld map that shows the weld identification numbers. This QA Inspector measured a welding current of approximately 310 amps and 29.0 volts. Mr. He Hanbi appeared to be certified to make this weld and the base materials were preheated with electrical heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 used flux cored welding procedure WPS-B-T-2232-U4b-F to make OBG welds between OBG segment 13CW corner assembly deck plate DP3142A and edge plate DP3032A near panel point PP124. ABF CWI Mr. Li Shi You informed this QA Inspector that he does not have a weld map that shows the weld identification numbers. This QA Inspector measured a welding current of approximately 285 amps and 28.0 volts. Ms. Hue Junrong appeared to be certified to make this weld and the base materials were preheated with electrical heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Xianyou stencil 047866 used flux cored welding procedure WPS-B-T-2232-U4b-F to make OBG welds between OBG segment 13CW corner assembly deck plate DP3142A and edge plate DP3032A near panel point PP124. ABF CWI Mr. Li Shi You informed this QA Inspector that he does not have a weld map that shows the weld identification numbers. This QA Inspector measured a welding current of approximately 300 amps and 29.0 volts and the base materials were preheated with electrical heaters prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. He Han Qiang, stencil 201981 used flux cored welding procedure WPS-B-T-2231-B-U3-F to make OBG segment 13CW root pass weld SA3232-001-004. This weld joins deck plate DP3150 to DP3151. This QA Inspector observed a welding current of approximately 260 amps and 29 volts. Mr. He Han Qiang appeared to be certified to make this weld and the base materials were heated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural

Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer